

REMARKS

Claims 1, 3-5, 7, 9-11, 34, 37, 44, 49-52, 54-56, 63 and 64 are currently pending in the subject application, and are presently under consideration. Claims 44, 50, 51, 54-56, 63 and 64 are allowed. Claims 1, 3-5, 7, 9-11, 34 and 37 are rejected. Claims 49 and 52 have been indicated as allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims. Claims 34, 49, and 52 have been amended. Claims 9 and 37 have been cancelled. Favorable reconsideration of the application is requested in view of the amendments and comments herein.

I. Amendment to the Drawings

FIG. 5 has been amended to illustrate that each of the filters can be controlled by the control system 152 to maintain consistency with claim 1. It is respectfully submitted that support for the drawing changes can be found at least in FIG. 4 and the accompanying text. An annotated sheet showing the changes has been provided.

II. Objection to Claims 9, 49, and 52

Claims 49 and 52 have been objected to as lacking support in the specification. Each of claims 49 and 52 has been amended to address the objects pointed out in the Office Action. Claim 9 has been cancelled. It is thus respectfully requested that this objection be withdrawn.

III. Rejection of Claims 1, 3-5, 7 and 9-11 Under 35 U.S.C. §112, Second Paragraph

Claims 1, 3-5, 7 and 9-11 stand rejected under 35 U.S.C. §112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter of the invention. Specifically, the Office Action states that the claim, as written, is inconsistent with FIG. 5, as it is not explicitly shown that the filters of FIG. 5 are controllable at the control system 152. It is respectfully submitted that FIG. 5 is merely exemplary, and that claim 1 merely

represents one possible implementation of the system illustrated in FIG. 1, with any reasonable combination of features from the various embodiments being illustrated generally in FIG. 1.

Thus, it is respectfully submitted that claim 1 reads at least on FIG. 1. In the interest of advancing the prosecution of this application, however, FIG. 5 has been amended to show connections between the control system and the filters. Support for the use of controlled filters at least in FIG. 4 and the accompanying text. Withdrawal of this rejection is thus respectfully requested.

IV. Rejection of Claims 34 and 37 Under 35 U.S.C. §103(a)

Claims 34 and 37 stands rejected under 35 U.S.C. §103(a) as being unpatentable over U.S. Patent No. 6,081,515 to Toivola ("Toivola") in view of U.S. Patent No. 6,611,565 B1 to Bada, et al. ("Bada") and U.S. Patent No. 7,289,784 B2 to Nam ("Nam"). Claim 34 has been amended to recite that distributing the analog multi-carrier signal into a plurality of analog signals, where distributing the analog multi-carrier signal comprises providing despreading signals to respective copies of the analog multi-carrier signal to recover the plurality of analog signals. It is respectfully submitted that Toivola in view of Bada and Nam fail to teach or suggest this despreading process. It is thus respectfully requested that the rejection of claim 34 be withdrawn.

V. Rejection of Claims 1, 4, 5 and 7 Under 35 U.S.C. §103(a)

Claims 1, 4, 5 and 7 stand rejected under 35 U.S.C. §103(a) as being unpatentable over Toivola in view of U.S. Patent No. 6,985,434 B2 to Wu, et al. ("Wu") and U.S. Patent No. 6,115,368 to Schilling ("Schilling"). Withdrawal of this rejection is respectfully requested for at least the following reasons.

Claim 1 recites, in pertinent part, a digital-to-analog converter that converts a digital multi-carrier signal into an analog multi-carrier signal. The Office Action notes that Toivola does not provide this teaching, and relies on Wu to provide this teaching. It is respectfully

submitted, however, that Wu does not teach or suggest the conversion of a digital multi-carrier signal into an analog multi-carrier signal and the subsequent distribution of the signal into individual analog carrier signals for transmission. The Office Action cites a discussion of a multiple input, multiple output (MIMO) system in the Background of the Invention in Wu that utilizes space time transmitter diversity. Col. 1, lines 25-35. To this end, each transmitter has a forward error correction encoder, Col. 1, lines 36-38, feeding a QAM modulator. The product of the QAM modulator is fed to a DAC. Col. 1, lines 38-46.

It is respectfully submitted that there is no indication in the cited portion of Wu that the QAM modulator provides a multicarrier signal. In fact, Wu appears to state that there is a separate forward error correction encoder, and corresponding QAM modulator for each transmitter in a space/time diversity arrangement. In such a system, each QAM modulator would provide a single carrier signal in its associated transmitter, and the digital-to-analog converter referenced in the cited portion of Wu would not “convert a digital multi-carrier signal into an analog multicarrier signal” as recited in claim 1. The remainder of the Wu reference is consistent with this interpretation, with Figs. 5 and 6 illustrating individual digital-to-analog converters just prior to each antenna. It is thus respectfully submitted that Wu does not teach or suggest digital-to-analog conversion of a multi-carrier signal.

Schilling does not appear to remedy the deficiencies of Toivola in view of Wu, and is not relied upon for a teaching of digital-to-analog conversion of a multi-carrier signal. It is thus respectfully submitted that claim 1 is patentable over the cited art. Each of claims 4, 5, and 7 depend from claim 1, and are allowable for at least the same reasons. For the reasons described above, claims 1, 4, 5 and 7 should be patentable over the cited art, and withdrawal of this rejection is respectfully requested.

VI. Rejection of Claim 3 Under 35 U.S.C. §103(a)

Claim 3 stands rejected under 35 U.S.C. §103(a) as being unpatentable over Toivola in view of Wu and Schilling as applied to claim 1, and further in view of U.S. Patent No. 6,291,924

B1 to Lau, et al. ("Lau"). Lau does not appear to remedy the deficiencies of Toivola in view of Wu and Schilling with respect to claim 1, as described above. Claim 3 depends from claim 1, and is allowable for at least the same reasons. It is thus respectfully submitted that claim 3 should be patentable over the cited art, and withdrawal of this rejection is respectfully requested.

VII. Rejection of Claims 10 and 11 Under 35 U.S.C. §103(a)

Claims 10 and 11 stand rejected under 35 U.S.C. §103(a) as being unpatentable over Toivola in view of Wu and Schilling as applied to claim 1, and further in view of U.S. Patent No. 5,805,983 to Naidu, et al. ("Naidu"). Naidu does not appear to remedy the deficiencies of Toivola in view of Wu and Schilling with respect to claim 1, as described above. Claims 10 and 11 each depend, directly or indirectly, from claim 1, and is allowable for at least the same reasons. It is thus respectfully submitted that claims 10 and 11 should be patentable over the cited art, and withdrawal of this rejection is respectfully requested.

CONCLUSION

In view of the foregoing remarks, Applicant respectfully submits that the present application is in condition for allowance. Applicant respectfully requests reconsideration of this application and that the application be passed to issue.

Please charge any deficiency or credit any overpayment in the fees for this amendment to our Deposit Account No. 20-0090.

Respectfully submitted,

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